

REMARKS

Claims 10-20 have been canceled. Claims 1-3 and 6-8 have been amended. Support for the proposed amendments may be found between line 12 on page 12 and line 20 on page 13 of the Patent Application and in Figure 5. No new matter has been added. Thus, claims 1-9 are pending in the present application.

In the Office Action, the Examiner objected to claims 2-3, 5, 9, 12, and 16 as allegedly being in improper dependent form. Claims 12 and 16 have been canceled rendering the Examiner's objections to these claims moot. Pursuant to the amendments indicated herein, Applicants respectfully submit that claims 2-3, 5, and 9 are in proper dependent form and request that the Examiner's objections to these claims be withdrawn.

In the Office Action, the Examiner objected to claims 1, 3, 6, 10, 13, 17, and 19 for allegedly including a number of informalities. Claims 10, 13, 17, and 19 have been canceled rendering the Examiner's objections to these claims moot. Pursuant to the amendments indicated herein, Applicants respectfully submit that claims 1, 3, and 6 are in proper form and requests that the Examiner's objections to these claims be withdrawn.

In the Office Action, claims 1-9 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Pursuant to the amendments indicated herein, Applicants respectfully submit that claims 1-9 are definite and request that the Examiner's objections to these claims under 35 U.S.C. § 112, second paragraph, be withdrawn.

In the Office Action, claims 1-5, 10-12, and 17 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Schaub (U.S. Patent No. 5,287,516). Claim 18 was rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Schaub. Claims 10-12 and 17-18 have been

canceled, rendering the Examiner's rejections of these claims moot. The Examiner's remaining rejections are respectfully traversed.

Schaub describes a demodulator for binary data. When a decoder determines that the likelihoods of two possible values of a bit ("1" and "0") are equal, the value of the bit is selected to be "1." However, Schaub does not describe or suggest techniques for distinguishing between sequences of bits that have the same maximum likelihood value. Accordingly, Schaub fails to teach or suggest selecting for output one of a plurality of sequences of bits that are determined to have a maximum likelihood based on a plurality of soft symbol metrics for a data block, as set forth in independent claims 1 and 6. Schaub is also completely silent with regard to weights that may be determined based upon the number of non-zero bits in the sequence and therefore also fails to describe or suggest that the selected sequence has a weight (determined by a number of non-zero bits in the sequence) that is greater than a minimum weight for the plurality of sequences, as also set forth in independent claims 1 and 6. Furthermore, Schaub fails to teach or suggest selecting the sequence randomly from a plurality of sequences that all have the same weight, as set forth in independent claim 6.

For at least the aforementioned reasons, Applicants respectfully submit that the present invention is not anticipated by Schaub and request that the Examiner's rejections of claims 1-5 under 35 U.S.C. § 102(b) be withdrawn.

In the Office Action, claims 1-5, 10-17, and 19-20 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Nara (U.S. Patent No. 6,061,823). Claims 10-17 and 19-20 have been canceled rendering the Examiner's rejections of these claims moot. The Examiner's remaining rejections are respectfully traversed.

Nara describes a technique for selectively inverting bits in a sequence based upon a reliability measure associated with each bit. However, Nara is concerned with analyzing individual bits in a sequence and does not describe or suggest techniques for distinguishing between sequences of bits that have the same maximum likelihood value. Accordingly, Nara fails to teach or suggest selecting for output one of a plurality of sequences of bits that are determined to have a maximum likelihood based on a plurality of soft symbol metrics for a data block, as set forth in independent claims 1 and 6. Nara is also completely silent with regard to weights that may be determined based upon the number of non-zero bits in the sequence and therefore also fails to describe or suggest that the selected sequence has a weight (determined by a number of non-zero bits in the sequence) that is greater than a minimum weight for the plurality of sequences, as also set forth in independent claims 1 and 6. Furthermore, Nara fails to teach or suggest selecting the sequence randomly from a plurality of sequences that all have the same weight, as set forth in independent claim 6.

For at least the aforementioned reasons, Applicants respectfully submit that the present invention is not anticipated by Nara and request that the Examiner's rejections of claims 1-5 under 35 U.S.C. § 102(b) be withdrawn.

In the Office Action, claims 6-9 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Chen (U.S. Patent No. 5,586,128). The Examiner's rejections are respectfully traversed.

Chen describes randomly selecting one of a plurality of sequences when each of the sequences in the plurality of sequences has the same maximum likelihood. However, Chen is completely silent with regard to weights that may be determined based upon the number of non-zero bits in the sequence and therefore also fails to describe or suggest that the selected sequence

has a weight (determined by a number of non-zero bits in the sequence) that is greater than a minimum weight for the plurality of sequences, as set forth in independent claims 1 and 6. Furthermore, Chen fails to teach or suggest selecting the sequence randomly from a plurality of sequences that all have the same weight, as set forth in independent claim 6.

For at least the aforementioned reasons, Applicants respectfully submit that the present invention is not anticipated by Chen and request that the Examiner's rejections of claims 6-9 under 35 U.S.C. § 102(b) be withdrawn.

For the aforementioned reasons, it is respectfully submitted that all claims pending in the present application are in condition for allowance. The Examiner is invited to contact the undersigned at (713) 934-4052 with any questions, comments or suggestions relating to the referenced patent application.

Respectfully submitted,

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